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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,004	02/25/2005	Donald A. Sheldon	TCO4-107US	2828
23122	7590	11/27/2006	EXAMINER	
RATNERPRESTIA			CHOI, PETER Y	
P O BOX 980			ART UNIT	PAPER NUMBER
VALLEY FORGE, PA 19482-0980			1771	

DATE MAILED: 11/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/526,004	<b>Applicant(s)</b> SHELDON ET AL.	
	<b>Examiner</b> Peter Y. Choi	<b>Art Unit</b> 1771	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 12-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/25/05 and 10/31/05</u> | 6) <input type="checkbox"/> Other: _____  |

**NON-FINAL ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of claims 1-11 drawn to an absorbent core in the reply filed on September 14, 2006 is acknowledged. Claims 12-43 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on September 14, 2006.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the Applicant regards as his invention.

3. Claims 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

As to claim 7, the phrase "the another stratum" is indefinite as to scope and to meaning. claim 7 depends from claim 6 which recites a core comprising two or more adjacent and coextensive stratum, one stratum comprising a layer of filaments having superabsorbent material and another stratum comprising a layer of filaments substantially free of superabsorbent material. It is unclear whether "the another stratum" in claim 7 refers directly to the "another stratum" recited in claim 6, which is substantially free of superabsorbent material, or simply an additional stratum which may consist of a possible third or fourth adjacent and coextensive stratum

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comprised in the core. The particularity of the current claim language needs to be improved.

Therefore, claim 7 is indefinite as to the scope and the meaning of "another stratum."

If "the another stratum" recited in claim 7 refers directly to the "another stratum" in claim 6, Examiner suggests that Applicants replace the phrase "another stratum" in both claims with "second stratum" for clarity. If the "another stratum" recited in claim 7 refers simply to an additional stratum which the core may be comprised of, then Examiner suggests that Applicants replace the phrase "another stratum" in claim 7 to "an additional stratum" or "a third stratum."

As to claim 8, the phrase "the liquid superabsorbent material" lacks proper antecedent basis. Examiner suggests that Applicants replace the term "material" with "polymer."

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 4,888,238 to Katz.

As to claim 1, Katz discloses superabsorbent coated fibers and a method for their preparation which can be used in non-woven products. The method of preparing superabsorbent synthetic fibers comprises preparing a polymeric solution, adding synthetic fibers to the polymeric solution to coat the synthetic fibers, and fluff drying said fibers to form a complex (column 2, lines 13-24). As to claim 2, the synthetic fibers may be cellulose acetate, polyester,

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polyolefin, polyacrylonitrile, polyamide, dacron, nylon, or a bi-component fiber (column 2, lines 31-34). As to claim 3, the synthetic fiber is cellulose acetate, polyester, polyolefin, polyacrylonitrile, polyamide, dacron, nylon, or a bi-component fiber (See claim 25). As to claim 4, the synthetic fibers are coated by immersion in a solution of hydrophilic polymer (column 2, lines 34-36). As to claim 5, the synthetic fibers are added to a polymeric solution to coat said fibers (column 2, line 21-22). As to claim 10, the coated fibers can be mixed with other absorbent materials, for example as an addition to cellulose fluff pulps for use in diapers (column 1, lines 54-57).

6. Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 6,194,630 to Chihani.

As to claim 1, Chihani teaches an absorbent article in which superabsorbent particles are bound directly to essentially all surfaces of individual fibers so that distribution of the superabsorbents in a fiber structure can be better controlled (column 2, lines 12-15). Solid particles of superabsorbent material are directly thermobonded by heating the fiber, which may be comprised of polyethylene or polypropylene, polyester, polyamide, or bi-component fiber among others, to a temperature at which adhesion between fiber and particles is achieved (column 2, lines 25-29 and 54-57).

Recitations to an intermediate product cannot limit the final product claimed unless it can be shown how the final product distinguishes over the prior art due to the use of the claimed intermediate. If the structure of the prior art invention is formed by a process different from the claimed invention, but is identical to the structure of the claimed invention, the prior art

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anticipates the claimed invention. Even though the prior art invention discloses thermobonding the superabsorbent material to the fibers instead of applying the material with liquid superabsorbent polymer, the final structure of the prior art invention is identical to the claimed structure. The claim limitation requiring the superabsorbent material to be formed in place on the surface from a liquid superabsorbent polymer does not influence the structure of the final product. Thus, the limitations of claim 1 are met.

As to claim 9, the solid particles of superabsorbent material are brought into contact with essentially all surfaces of an individual thermoplastic polymeric fiber or a nonwoven material which includes thermoplastic polymeric fibers (column 2, lines 60-66).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 6, 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katz, as applied to claims 1-5 and 10 above, and further in view of USPN 6,383,960 to Everett.

The features of Katz have been set forth above. Katz discloses superabsorbent coated fibers and a method for their preparation which can be used in non-woven products such as diapers. As to claim 6, Katz does not teach multiple strata comprising filaments coated with superabsorbent material and filaments substantially free of superabsorbent material. Everett discloses an absorbent article including a core having multiple absorbent layers of selected fibers

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and high-absorbency particles (column 13, lines 62-65). Suitable hydrophilic fibers include cellulosic fibers, rayon fibers, particular polyester or polyamide fibers, and polypropylene fibers (column 14, lines 5-17). Additionally, the high-absorbency material can include a superabsorbent non-woven material composed of superabsorbent fibers alone or a composite of superabsorbent fibers and other materials (column 16, lines 19-24).

It would have been obvious to one of ordinary skill in this art at the time of the invention to combine into multiple strata, superabsorbent coated filaments and non-superabsorbent coated filaments. Everett teaches an absorbent core with multiple absorbent layers which will have a more efficient absorbent structure and high absorbent capacity. Additionally, the absorbent core of absorbent articles is commonly composed of wood pulp fibers, and superabsorbent material is often distributed in the absorbent core to enhance the liquid absorbent capacity (column 1, lines 57-60). Therefore, it would have been obvious to one of ordinary skill in this art to use multiple strata in Katz, as motivated by Everett which teaches multiple strata to better control absorption.

As to claim 7, Katz does not teach a surfactant on one of the strata. Everett teaches the absorbent article as outlined above with one stratum optionally treated with a surfactant to impart a desired level of wettability and hydrophilicity (column 13, lines 26-30). The application of the surfactant can act to accomplish the desired effect of the absorbent article by balancing the flow of the liquid with the absorption of liquid for greater efficiency in distribution throughout the superabsorbent material stratum. Therefore, it would have been obvious to one of ordinary skill in this art at the time the invention was made to apply a surfactant to at least part of a stratum of the absorbent core of Katz's invention. Everett's teaching would have motivated one of ordinary

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skill in this art to increase the efficiency of liquid flow and absorption throughout the superabsorbent material stratum.

As to claim 11, Katz does not teach the addition of superabsorbent polymer particles interspersed among at least some of the filaments. Everett teaches that in particular arrangements, the absorbent core may comprise a mixture of superabsorbent hydrogel forming particles and natural fibers, among other disclosed fibers (column 14, lines 55-64). Everett suggests that the addition of superabsorbent particles in lieu of additional superabsorbent material acts to increase the capacity of the absorbent core and control the absorbency rate without substantially increasing the size of the core. Therefore, it would have been obvious to one of ordinary skill in this art at the time the invention was made to add superabsorbent polymer particles among at least some of the filaments of the absorbent core. Addition of the superabsorbent particles allows for greater absorbency rate due to the isotropic swelling of superabsorbent particles as opposed to the anisotropic radial swelling of superabsorbent fibers. One of ordinary skill in this art would have been motivated to increase the capacity of the core and control the absorbency rate by adding superabsorbent polymer particles without substantially increasing the size and bulkiness of the core.

### *Conclusion*

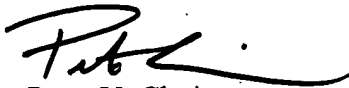
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Y. Choi whose telephone number is (571) 272-6730. The examiner can normally be reached on Monday - Friday, 08:00 - 17:00.



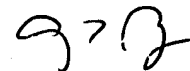
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Peter Y. Choi  
November 21, 2006



ANDREW PIZIALI  
PRIMARY EXAMINER